



**US Army Corps
of Engineers®**

Engineer Research and
Development Center

Product

Survey of Terrain Visualization Software

Technology

The *Survey of Terrain Visualization Software* is a web-based listing of mostly commercial software products related to 3-D terrain visualization. It describes applications such as real-time visual simulation software (e.g., OpenGVS and Vega Prime), geographic information systems (GIS) with capabilities for 3-D rendering and analysis (e.g., ARC/INFO and IDRISI), multi-disciplinary scientific visualization tools (e.g., IRIS Explorer and Open Visualization Data Explorer), modeling/animation packages (e.g., Creator and Maya), terrain modeling tools (e.g., TerraTools and Terra Vista), etc. The survey's home page makes the information accessible through an alphabetical index ("Table of Contents"), and by site-wide text-based query.

Survey listings provide information on more than 500 different products, including product names, sources, summaries of capabilities, system requirements, prices, and significant users and applications. (The survey does not compare products or endorse any particular product.) The data are compiled entirely from open sources, including vendor literature (press releases, advertisements, web sites, etc.), trade journal reviews, live demonstrations, etc.

The *Survey of Terrain Visualization Software* is a product of the Topographic Engineering Center's (TEC's) exploratory development to provide the U.S. Army and Department of Defense (DOD) with more effective ways to merge, visualize, and analyze battlefield terrain and environmental information. As part of this ongoing research, TEC maintains current listings of relevant commercial products and (where possible) industry's research and development activities, to identify technology gaps and emerging capabilities of interest.

Problem

Current terrain analysis, topographic, and reproduction support provided by Army Engineer Terrain Teams entails slow, labor-intensive processes that do not meet the needs of the Force XXI digital battlefield, where the commander must have the ability to rapidly obtain terrain information and topographic products. Terrain visualization software is required to render digital topographic data into useful, 3-D depictions of real-world locations. Better terrain visualization supports military situation awareness, command, and control, and mission planning and rehearsal. It can also facilitate numerous civil and environmental engineering applications—even planning for the Olympic Games.

Expected Cost To Implement

The *Survey of Terrain Visualization Software* is available via the World Wide Web (WWW), cost-free. Most of the listed products are standalone, commercial-off-the-shelf (COTS), software-only solutions. Some of the products do require companion software (such as AutoCAD or MicroStation), and a few require special hardware. These cases are duly noted.

Benefits/Savings

The survey is a time-saving online reference; it provides a ready-made resource for researchers and engineers requiring an overview of commercial solutions available for 3-D terrain visualization applications.

Status

The survey is an ongoing effort. New information is added to the survey as it becomes available. The survey web page and downloadable documents are time-stamped to reflect the most current update.

ERDC POC

Vineet Gupta, COMM: (703) 428-6838, DSN: 364-6838, E-mail:

Vineet.Gupta@erdc.usace.army.mil

Comments, suggestions, or requests for additional information about this survey or visualization research at TEC may be directed to:

rd2@tec.army.mil

Distribution Sources

The *Survey of Terrain Visualization Software* is accessible through URL:

<http://www.tec.army.mil/TD/tvd/survey/index.html>

Users without Internet access may request copies of the survey from the listed ERDC POC. Requests for electronic versions of the survey are preferred due to the immense volume of the printed version.